

Utah Department of Transportation Traffic Management Division

October 2015
Monthly Report



2060 South 2760 West Salt Lake City, Utah 84104 801-887-3710 www.udottraffic.utah.gov

Mission of the Traffic Management Division

- To Support UDOT and the Department of Public Safety to Achieve Zero Fatalities.
- To Help Provide Reliable and Efficient Travel Throughout Utah.
- To Provide Useful and Timely Real-time Traffic Information.
- To Work Together with Other Government Agencies to Serve the Public.
- To Provide Excellent Customer Service.

Traffic Operations Center



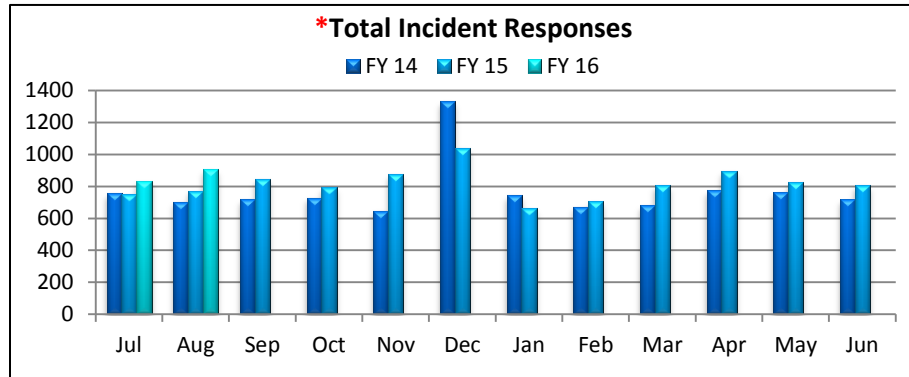
Field Devices Summary

Freeway PTZ Cameras	374
Surface Street PTZ Cameras	449
RWIS & Contracted Weather Cameras	210
Viewable Detection Cameras	66
Total Cameras	1099
Freeway VMS	97
Surface Street VMS	49
Portable TOC VMS	6
Legacy Trucks Prohibited VMS	21
Variable Speed Limit VMS	15
Chain-Up Signs	19
Total VMS	207
HAR (27 permanent/5 portable)	32
RWIS	98
Ramp Meters	63
TMS	544
Express Lane Plazas	63
Traffic Signals	2115

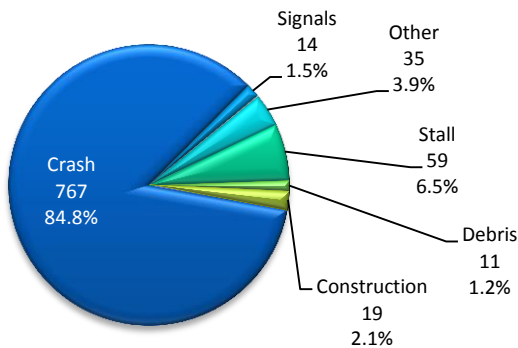
Operations Summary

VMS Messages Displayed	84,041
Signal Timing Work Orders	38
Signal Maintenance Work Orders	183
All New Work Orders	488
Work Orders Closed During the Month	424
Incident Responses by the TOC	905
Incident Duration Average Minutes	58
IMT Assists	1975
Website Visitor Sessions	92,453
511 Calls	9,306
Weather Desk Calls	151
Ask Commuterlink Questions	28
Average Speed AM Peak (07:00-08:00)	62.90
Average Speed PM Peak (17:00-18:00)	58.99
Incidents Using Signal Timing Assistance	126
UDOT Traffic Followers and Re-tweets	390,931
UDOT Traffic App Total Downloads	3,429

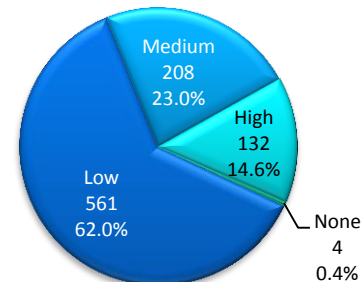
An incident response occurs each time an incident is recorded in the ATMS system. These can be of several types, including crash, construction, debris, stall, congestion, or other. Crashes are separated into three subcategories: property damage, personal injury, and fatal. Each time an incident is created, information is sent to the 511 system, the website, and to the public through email alerts. An incident remains active until it has been completely cleared from the roadway.



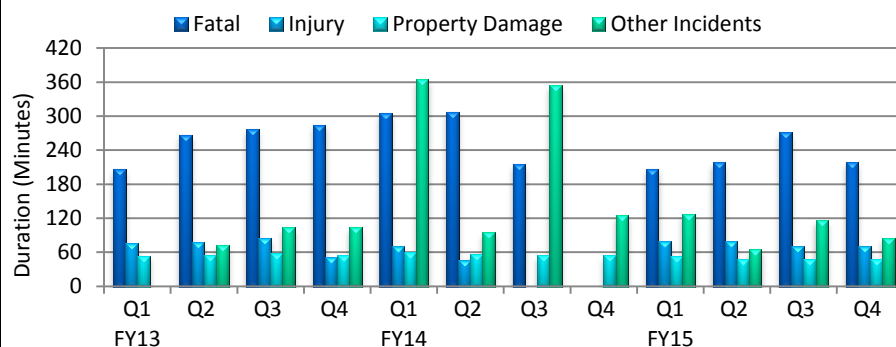
***Incidents By Type for August 2015**



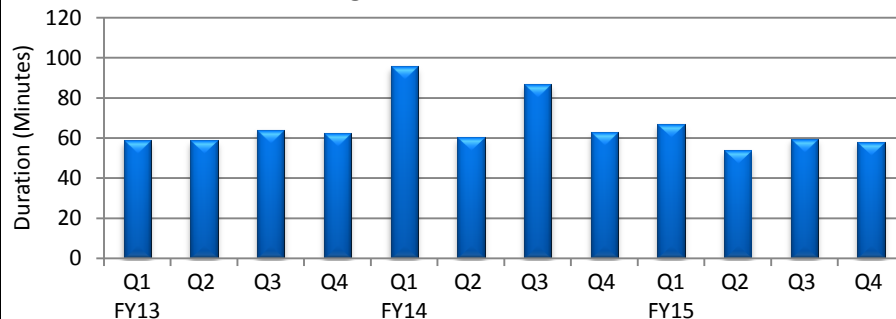
***Incidents by Severity for August 2015**



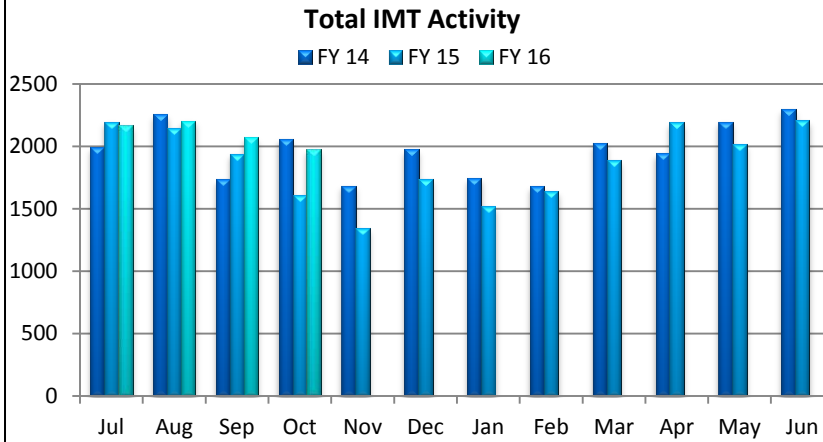
***Average Crash Duration**



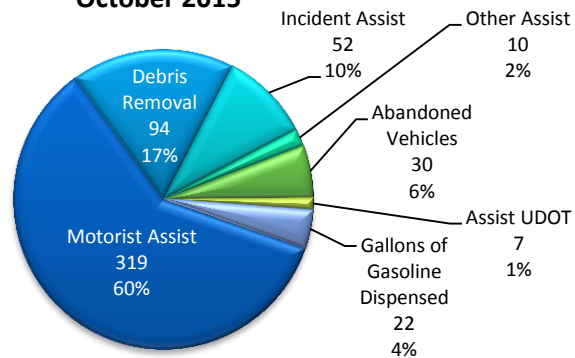
***Average Duration of All Incidents**



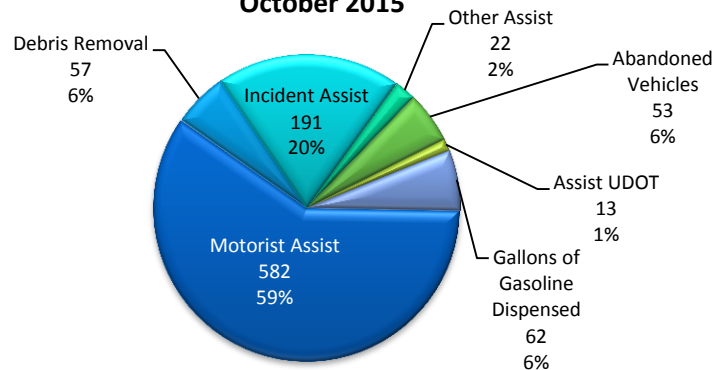
Incident Management Team (IMT) Activities



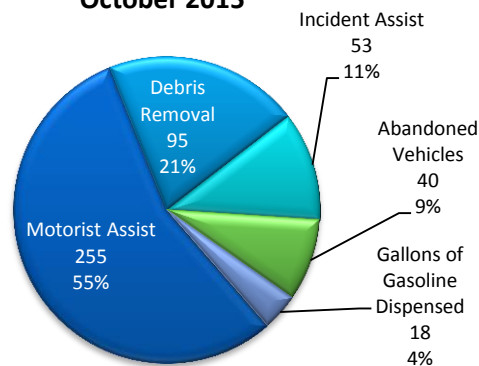
**IMT Activities by Type for UDOT Region 1
October 2015**



**IMT Activities by Type for UDOT Region 2
October 2015**



**IMT Activities by Type for UDOT Region 3
October 2015**



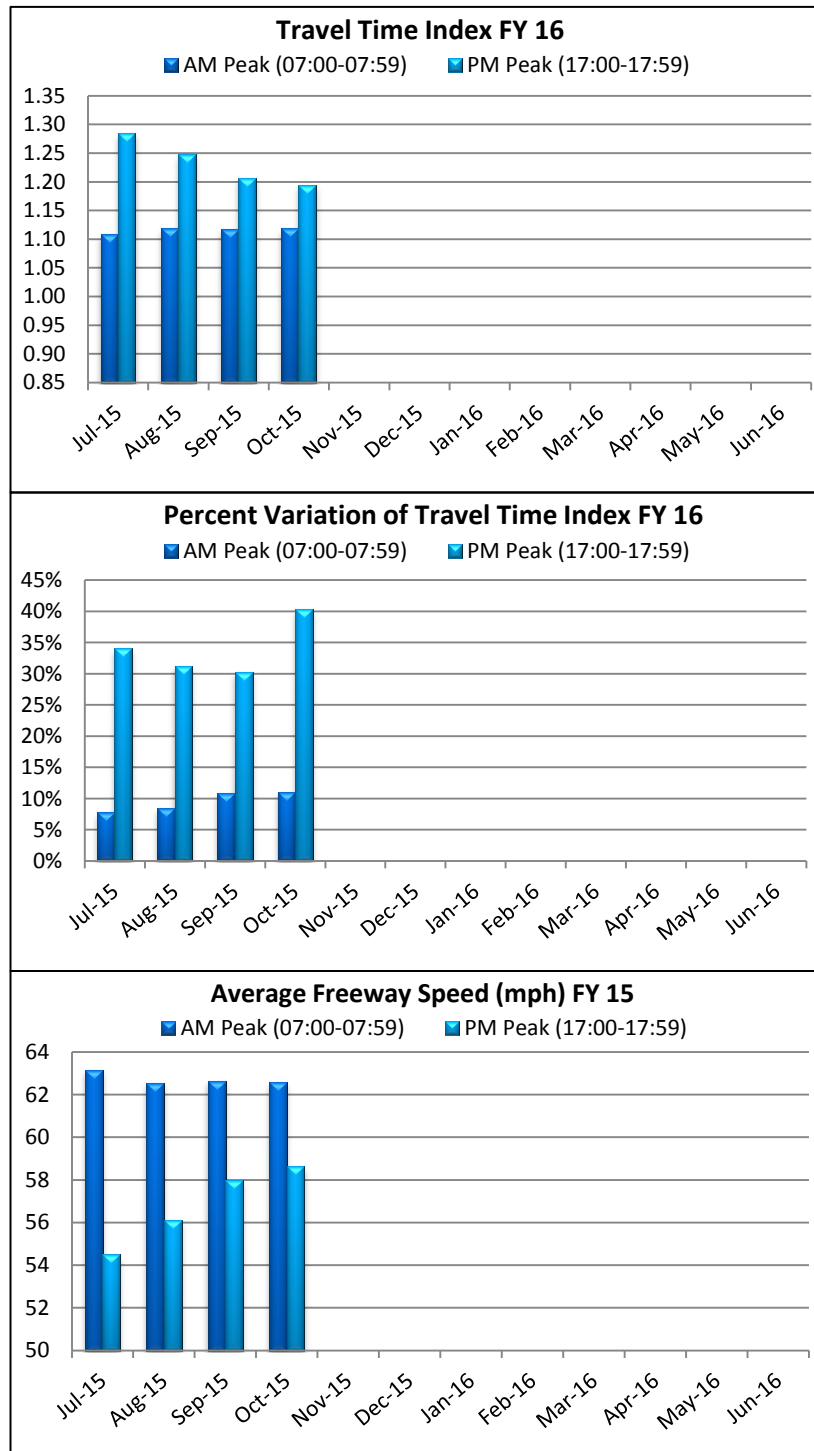
Freeway Traffic Level of Service

Freeway flow measures are taken from the Traffic Monitoring Stations (TMS) located throughout the Wasatch Front. As more TMS sites are installed throughout the state, they will be included in these performance measures.

Travel Time Index: This measure of mobility is based on freeway speeds and is weighted by segment lengths and by the traffic volume. A value of 1.0 represents free-flow speeds. A value of 1.12 indicates that the average vehicle trip takes 12% longer than if that were the only vehicle on the freeway.

Percent Variation of Travel Time Index: The percent variation in the Travel Time Index is a measure of how much the Travel Time Index changes from day-to-day.

Average Freeway Speed: The freeway speed is weighted by volume.



Freeway Traffic Level of Service

Peak Travel Time Index by Segment for October 2015

(+) Direction (NB, EB, Clockwise)

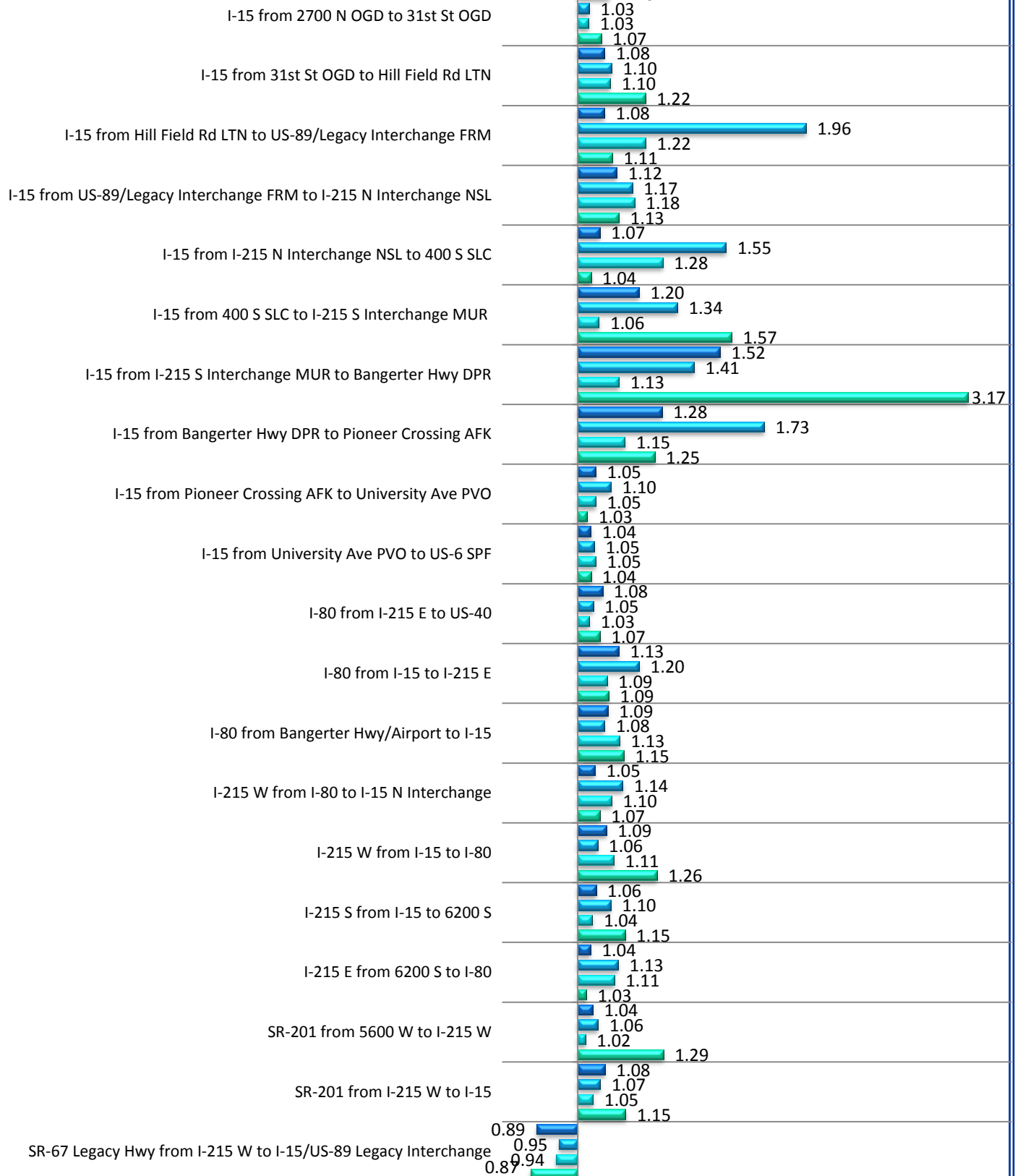
(-) Direction (SB, WB, Counter Clockwise)

AM Peak (07:00-07:59)

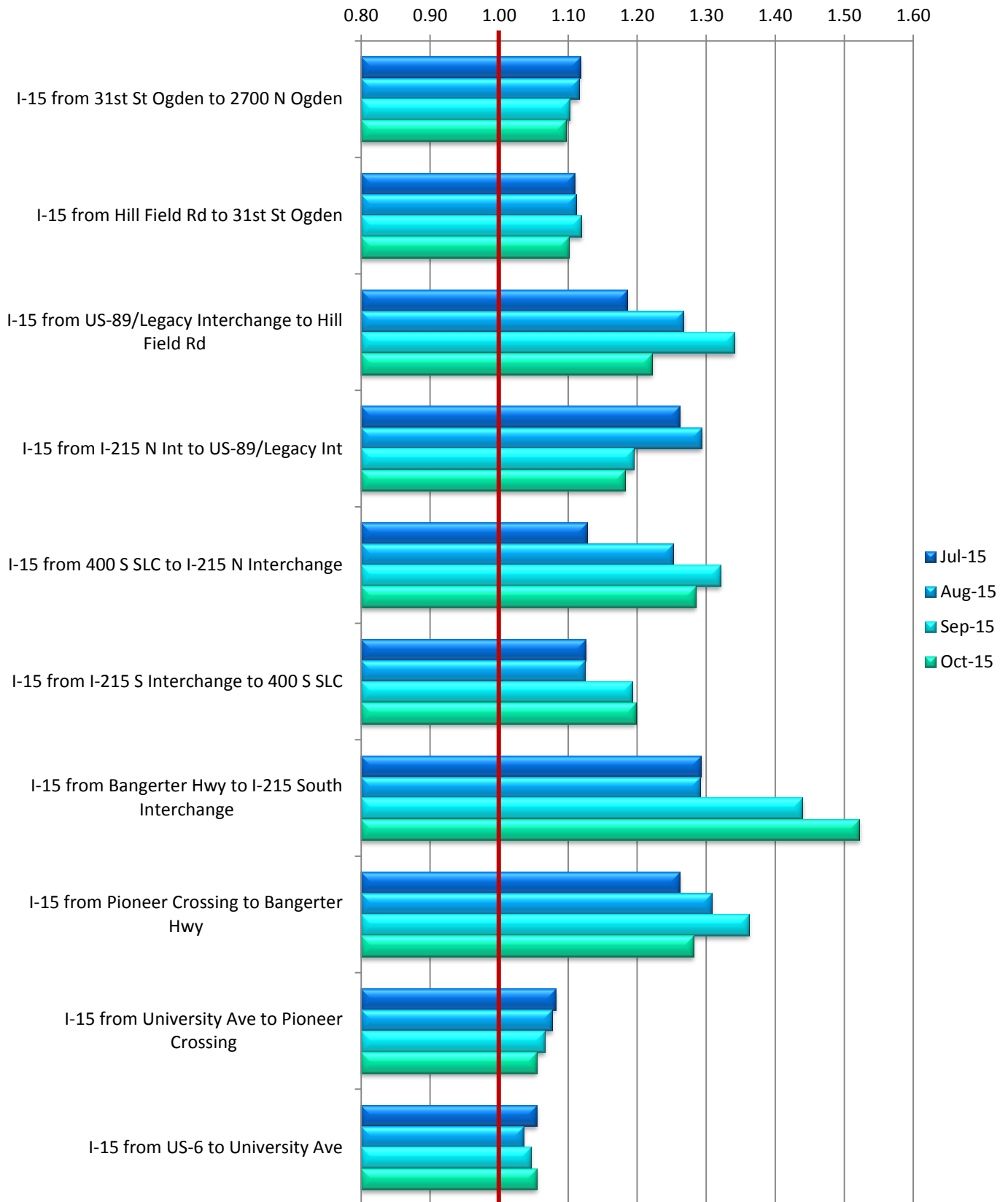
PM Peak (17:00-17:59)

AM Peak (07:00-07:59)

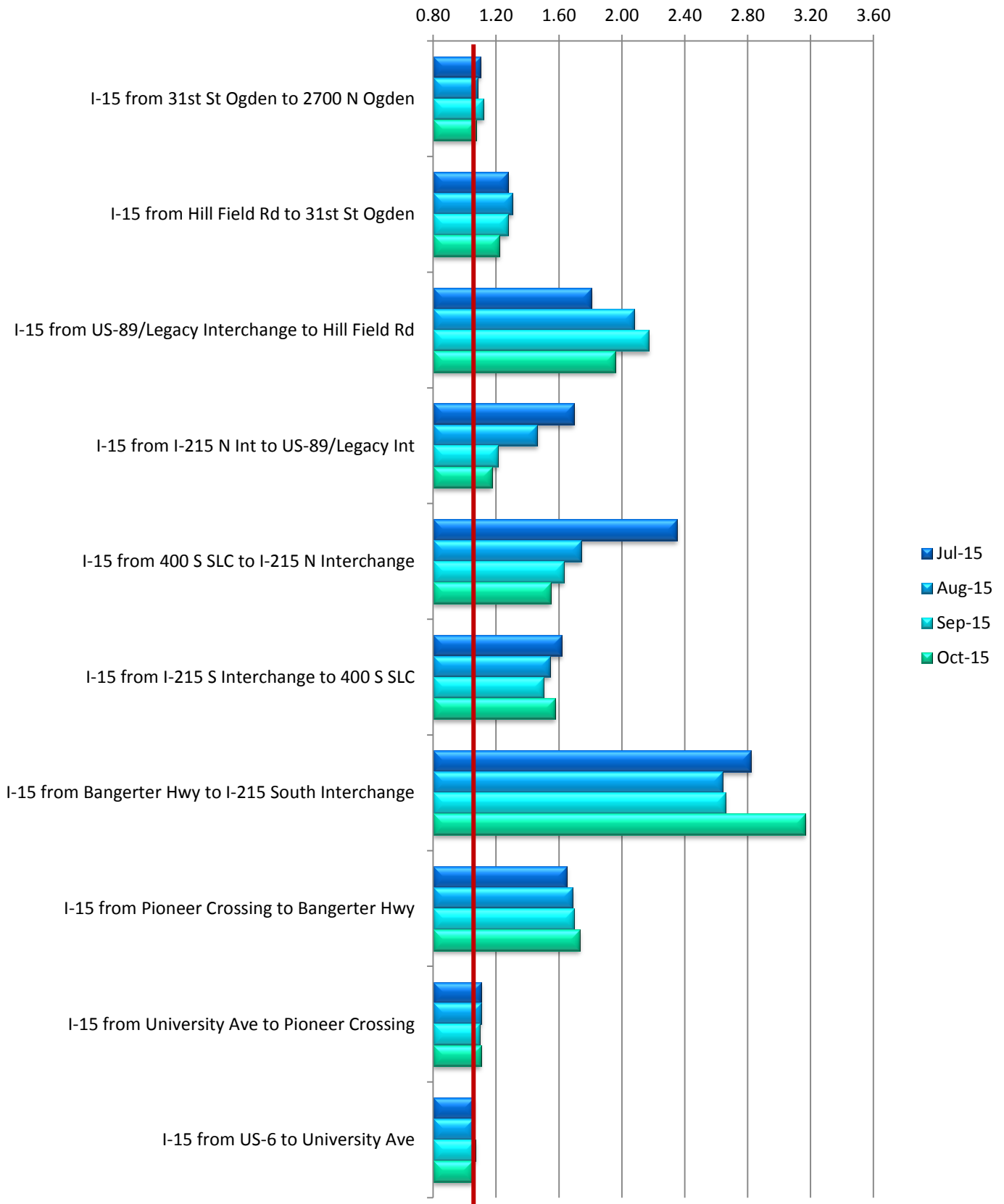
PM Peak (17:00-17:59)



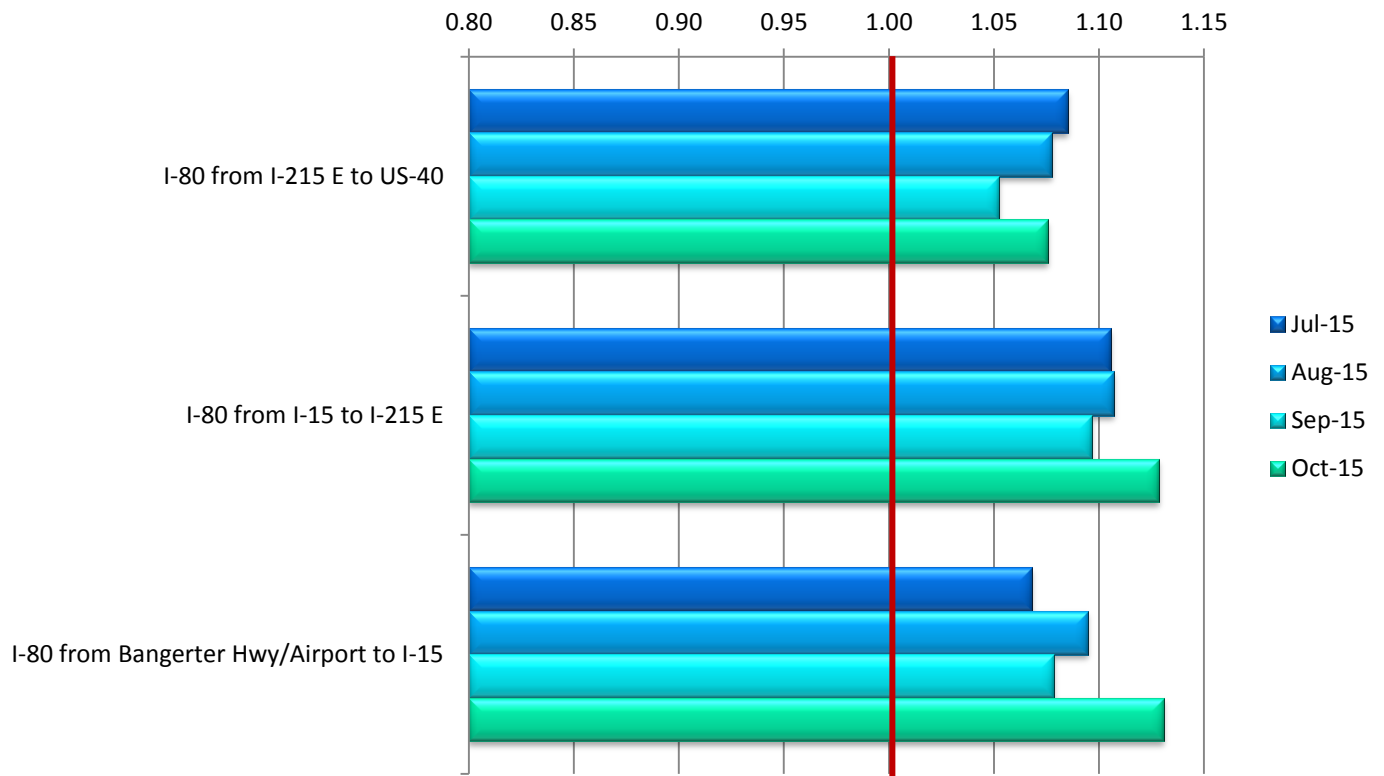
AM Peak Travel Time Index for I-15 FY 16



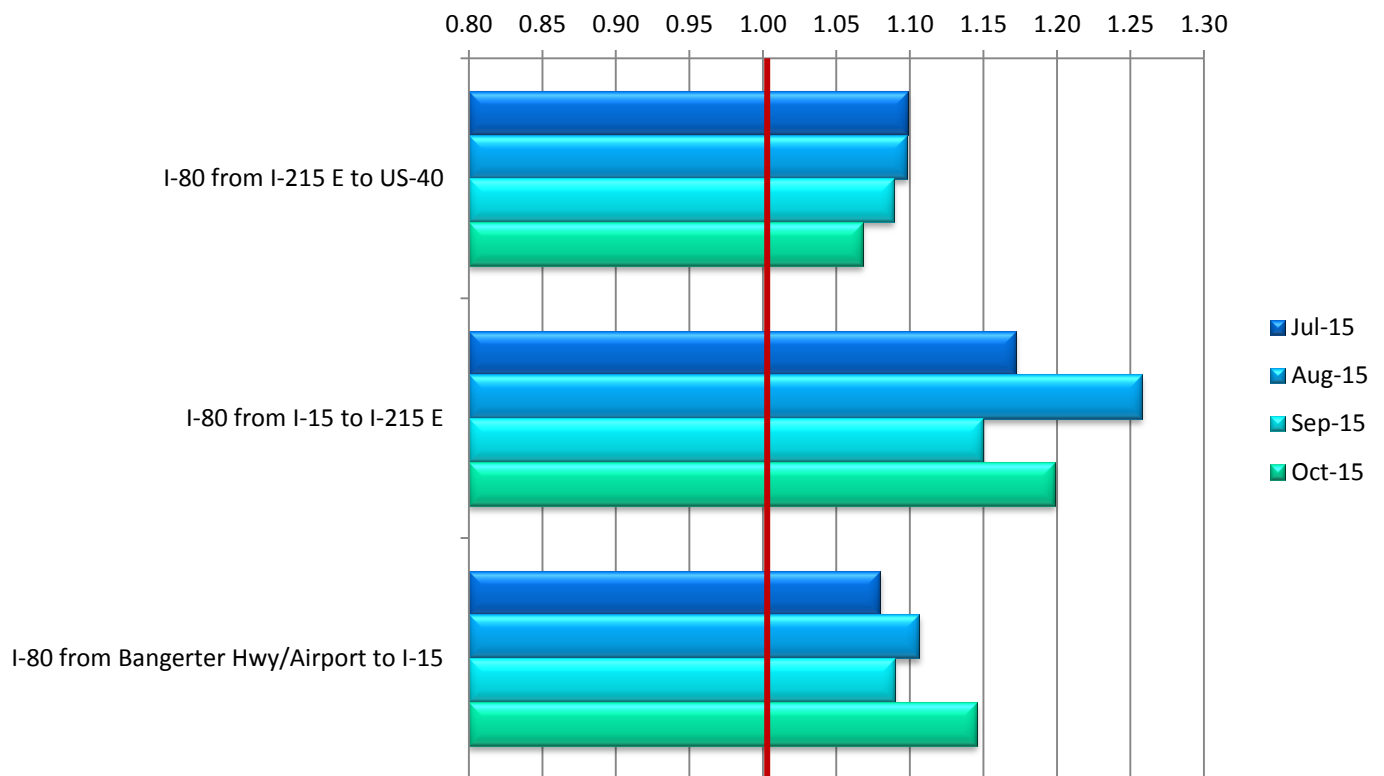
PM Peak Travel Time Index for I-15 FY 16



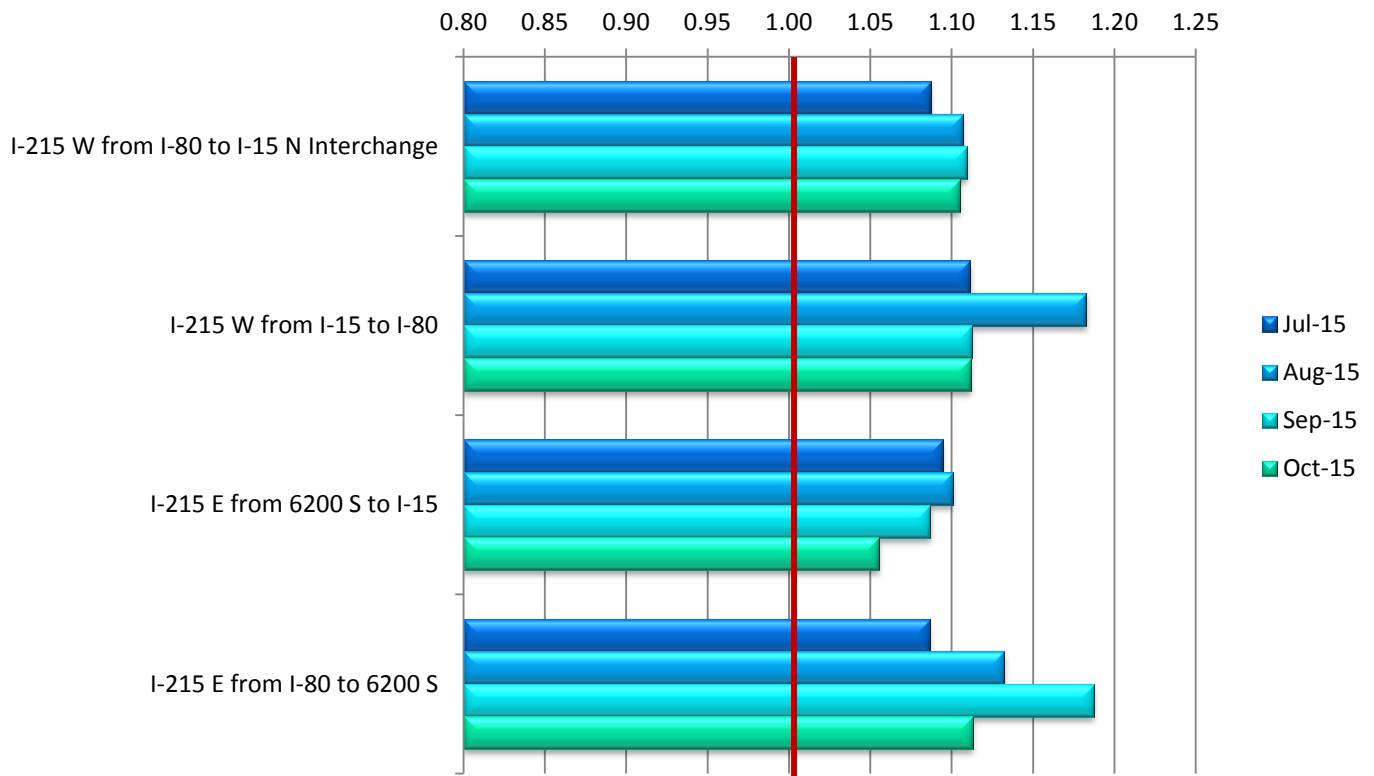
AM Peak Travel Time Index for I-80 FY 16



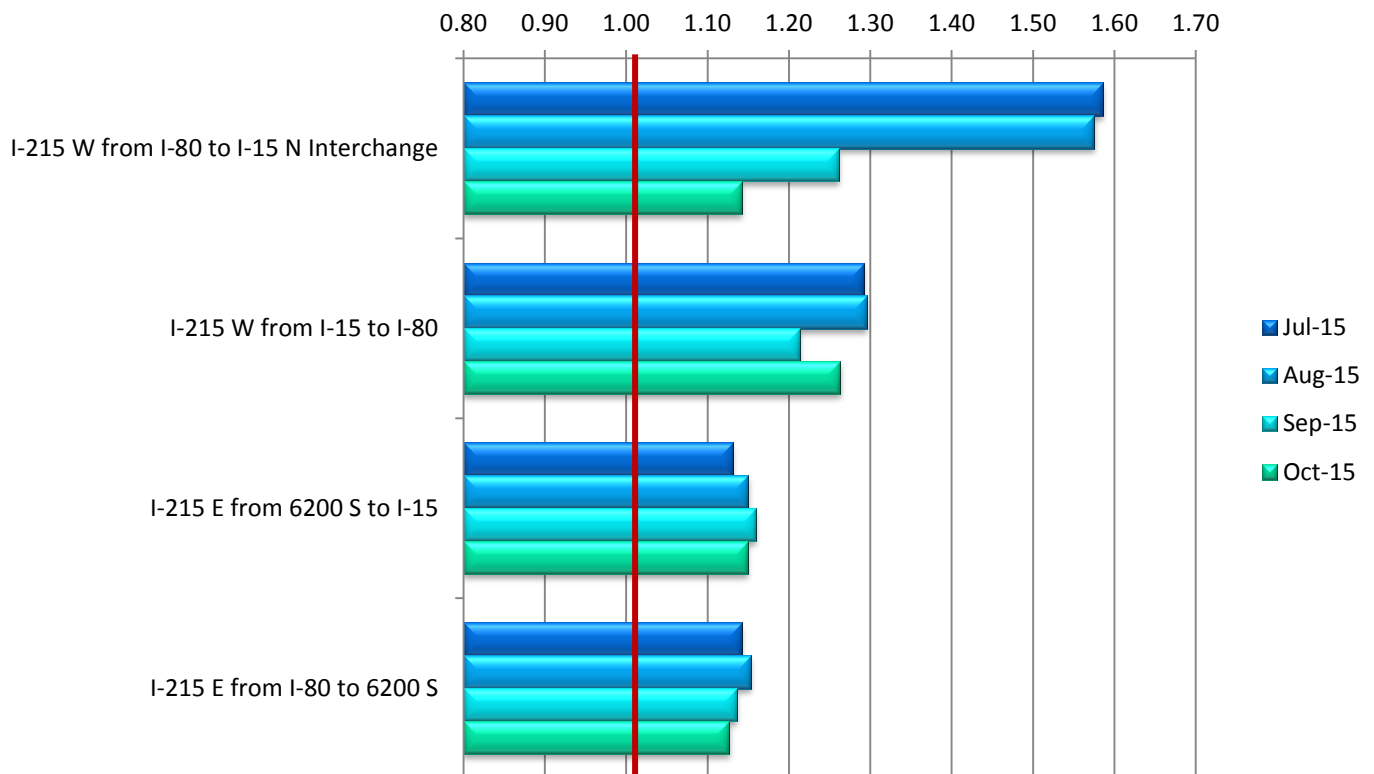
PM Peak Travel Time Index for I-80 FY 16



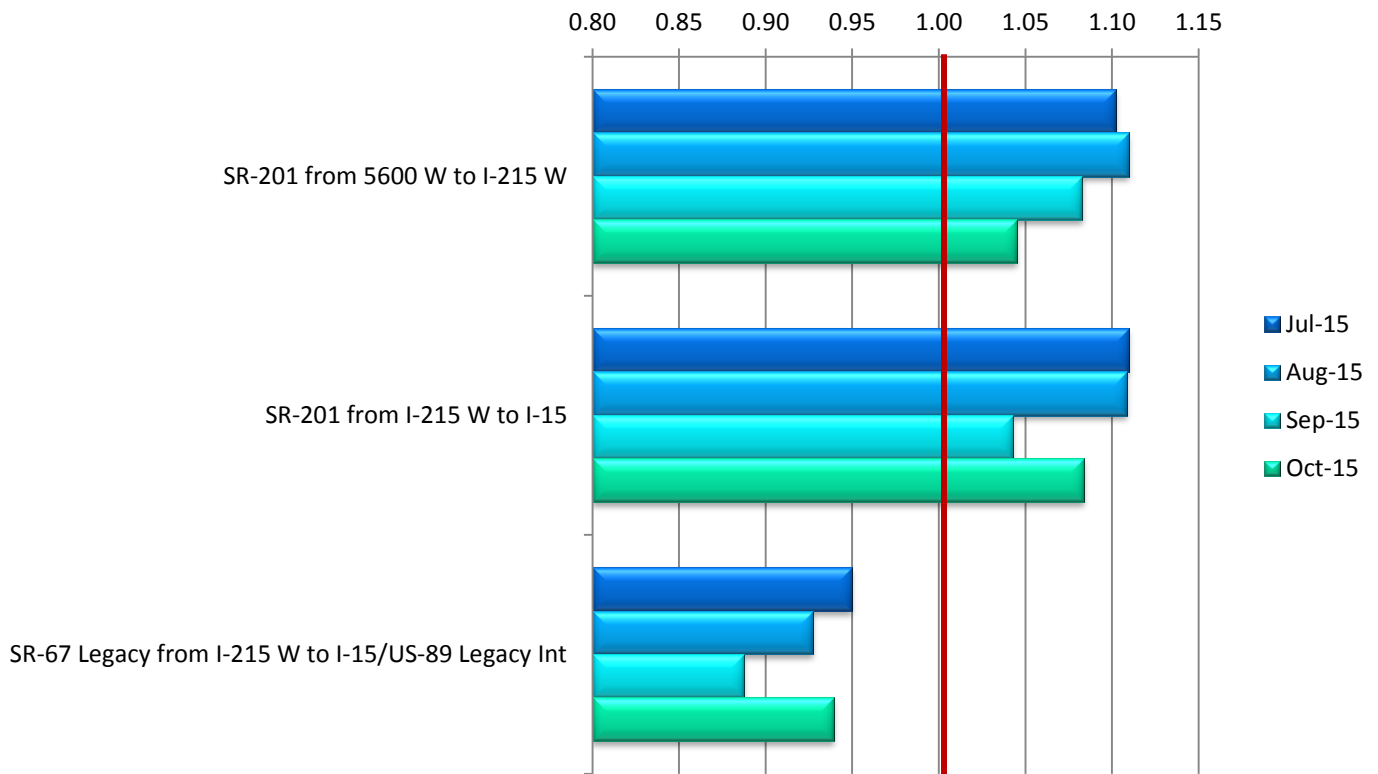
AM Peak Travel Time Index for I-215 FY 16



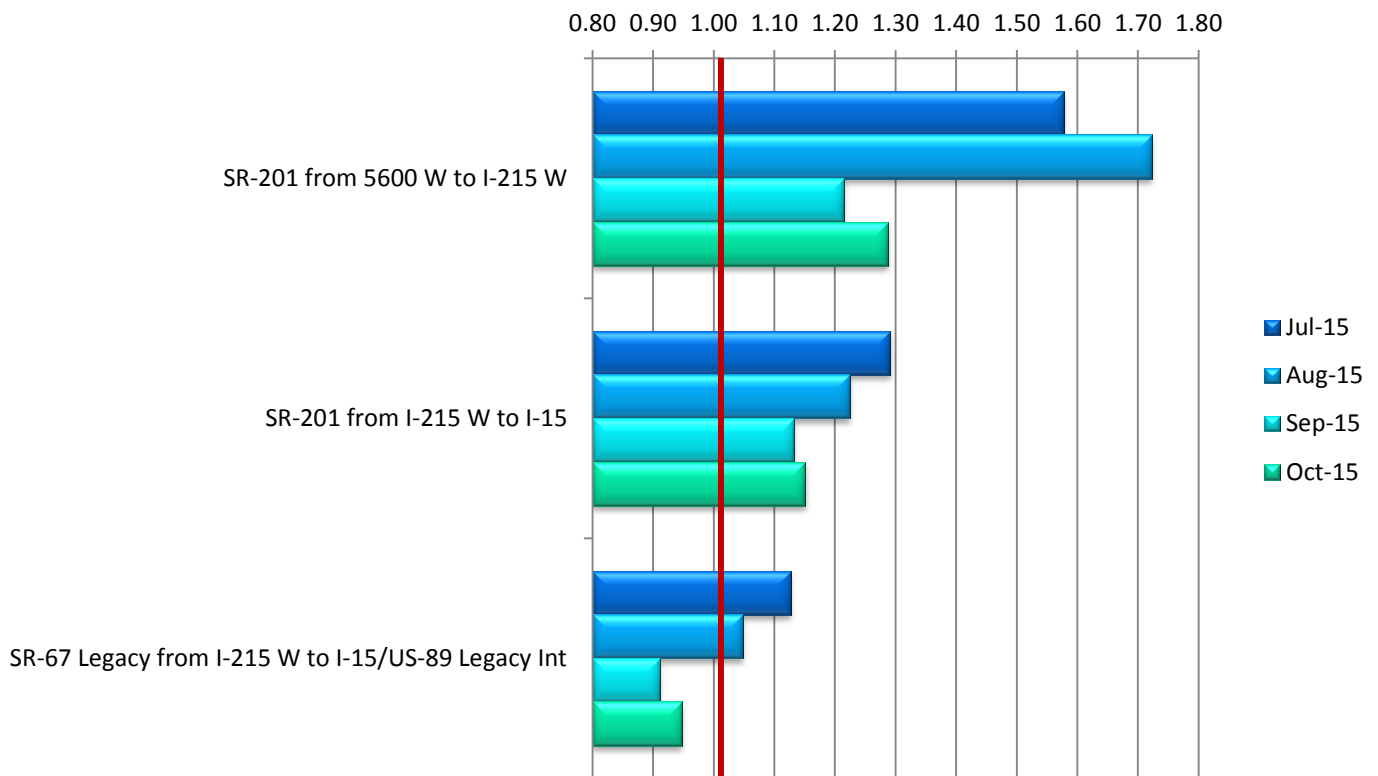
PM Peak Travel Time Index for I-215 FY 16



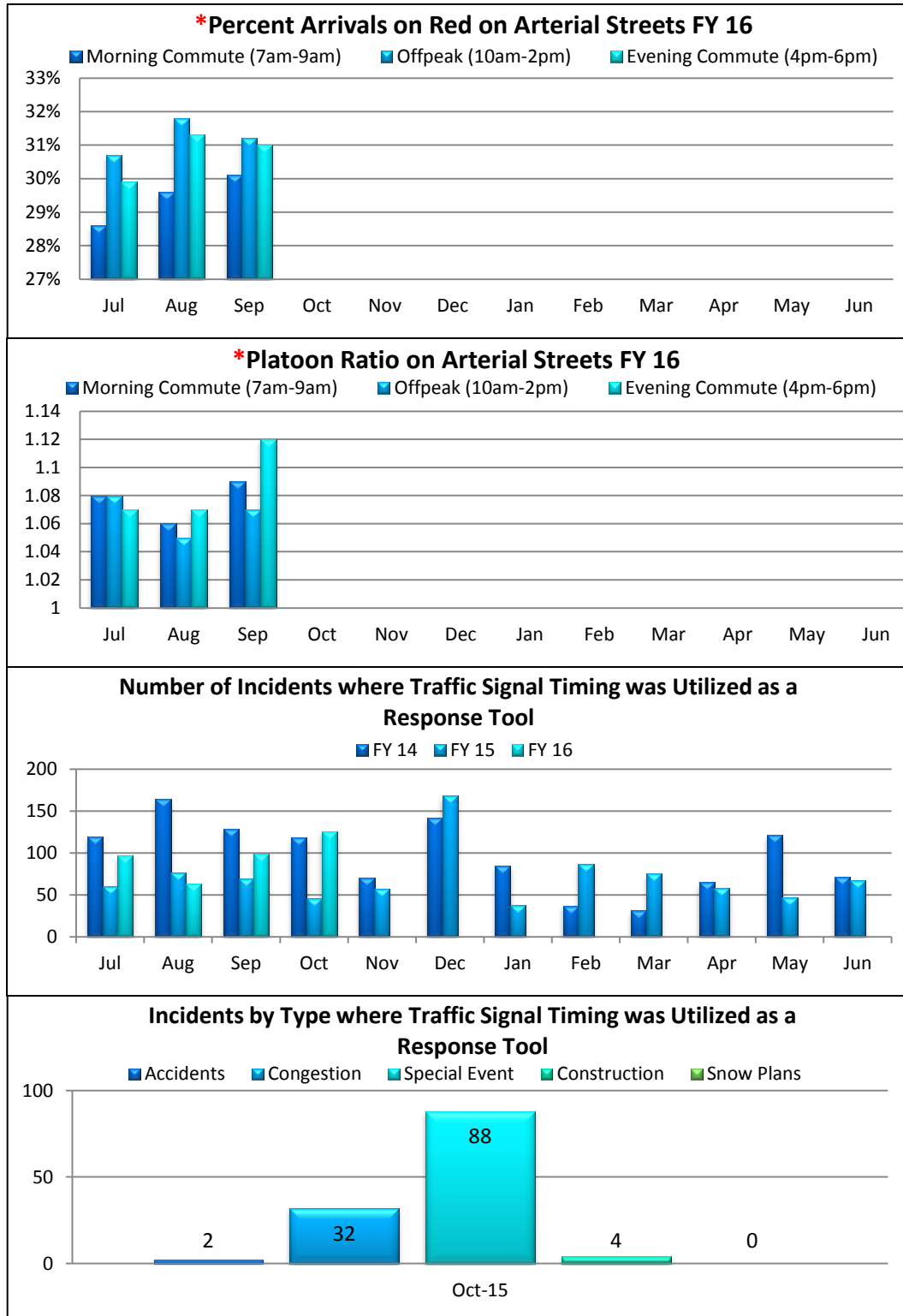
AM Peak Travel Time Index for SR-201 and SR-67 Legacy Hwy FY 16

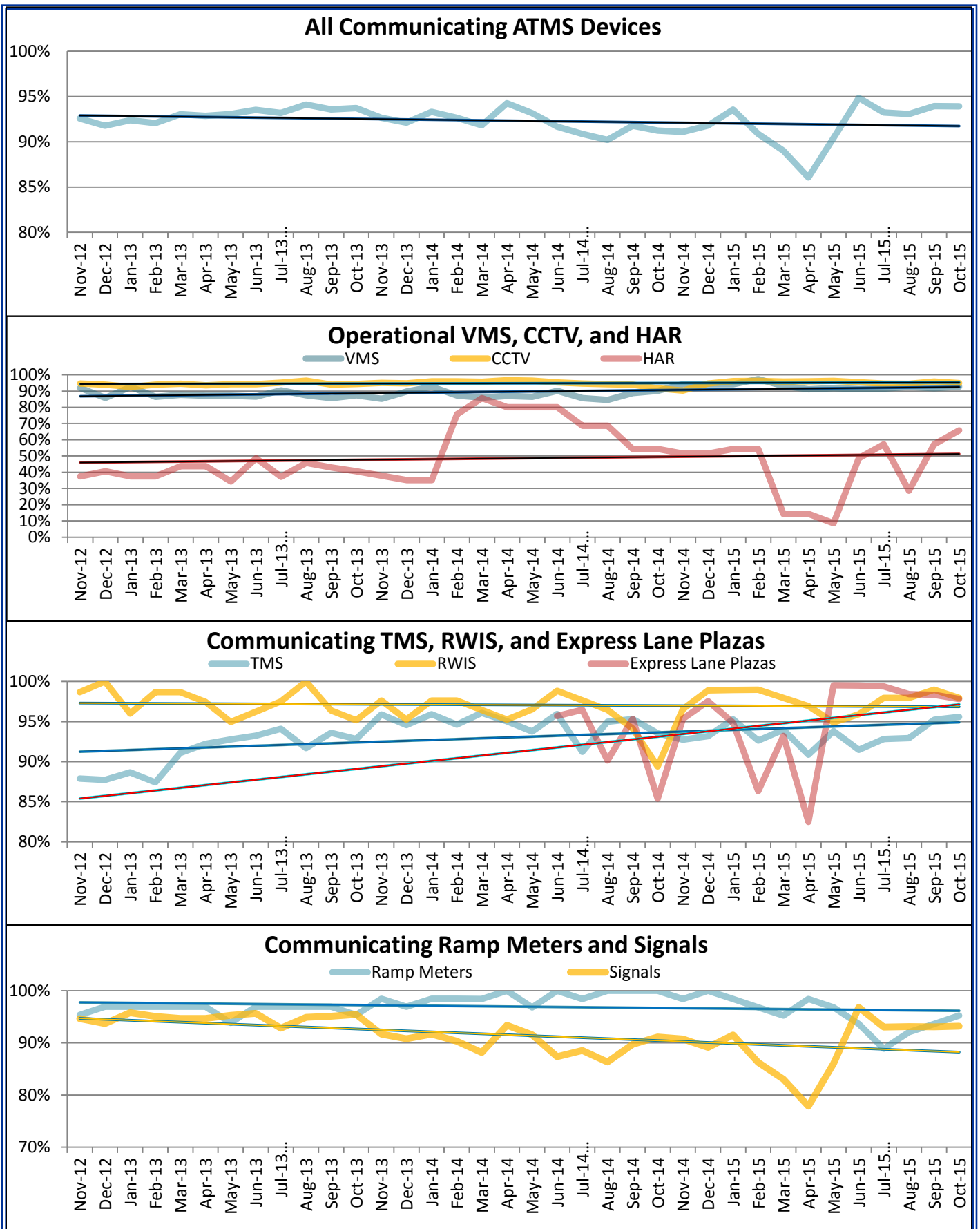


PM Peak Travel Time Index for SR-201 and SR-67 Legacy Hwy FY 16

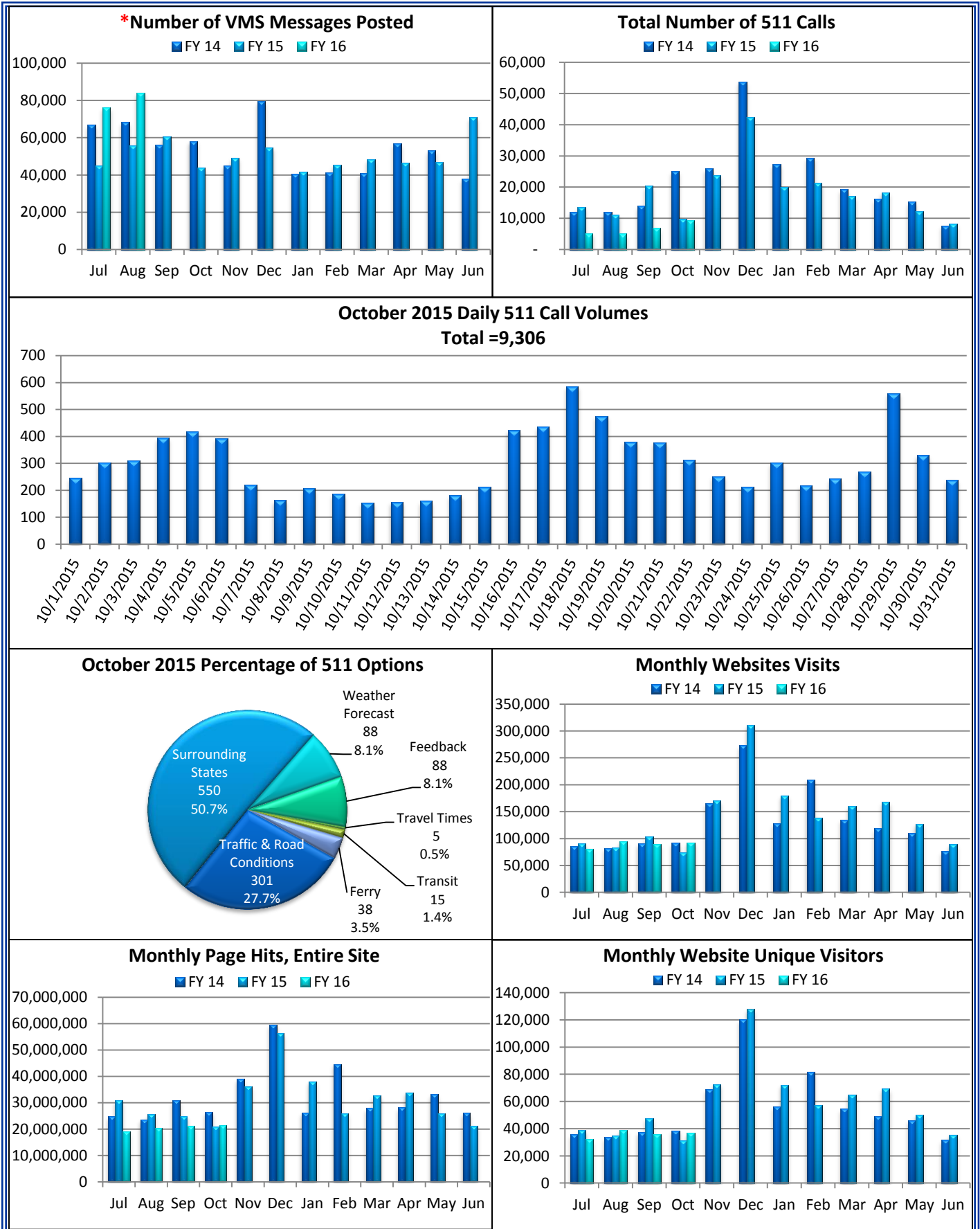


The percent arrival on red along the arterial statistics are generated automatically through the automated traffic signal performance measures, which show real-time and historical functionality at signalized intersections. The system automatically time-stamps when each vehicle arrives at the intersection and then compares the detection time-stamp if the phase was green or red. The percent arrival on red data is averaged over the 24 hours of the day and days in the month. . The lower charts shows the number of incidents where traffic signal timing was modified in order to help traffic flow around closed lanes, or to help relieve excessive congestion.

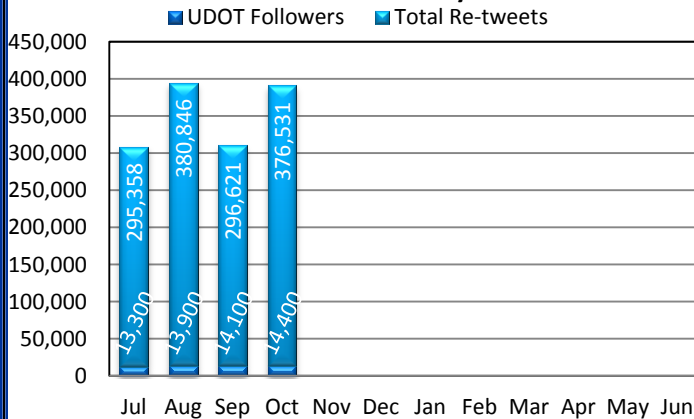




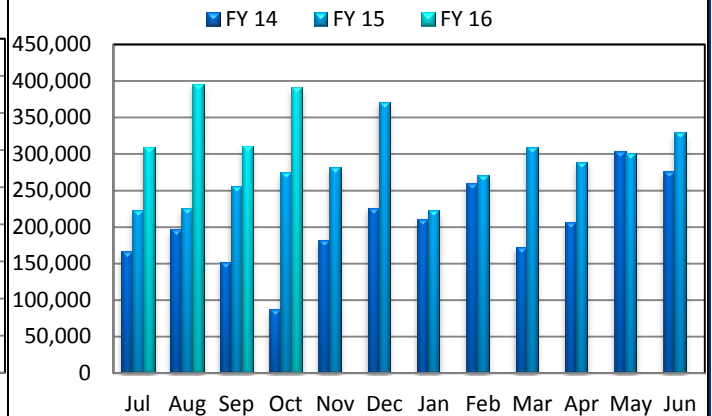
Traveler Information **Note – No VMS Data received Since August*



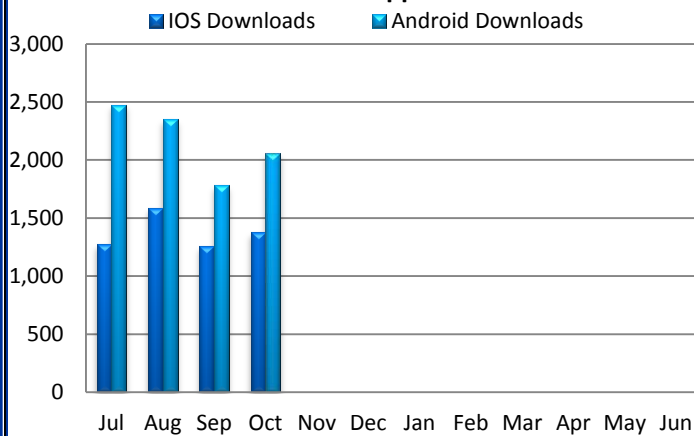
UDOT Traffic Twitter Activity - FY 16



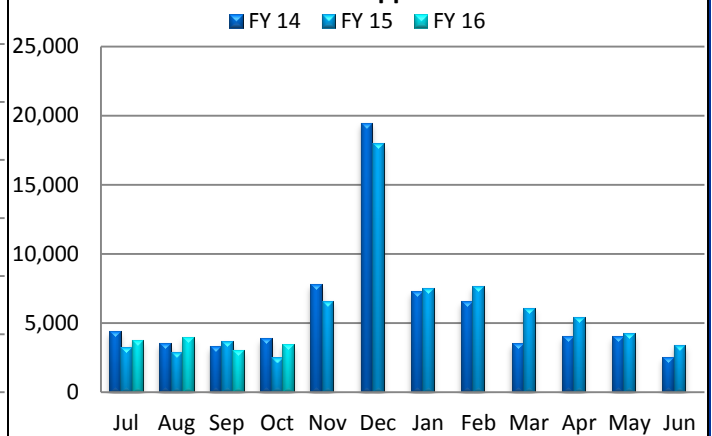
UDOT Traffic Followers and Re-tweets



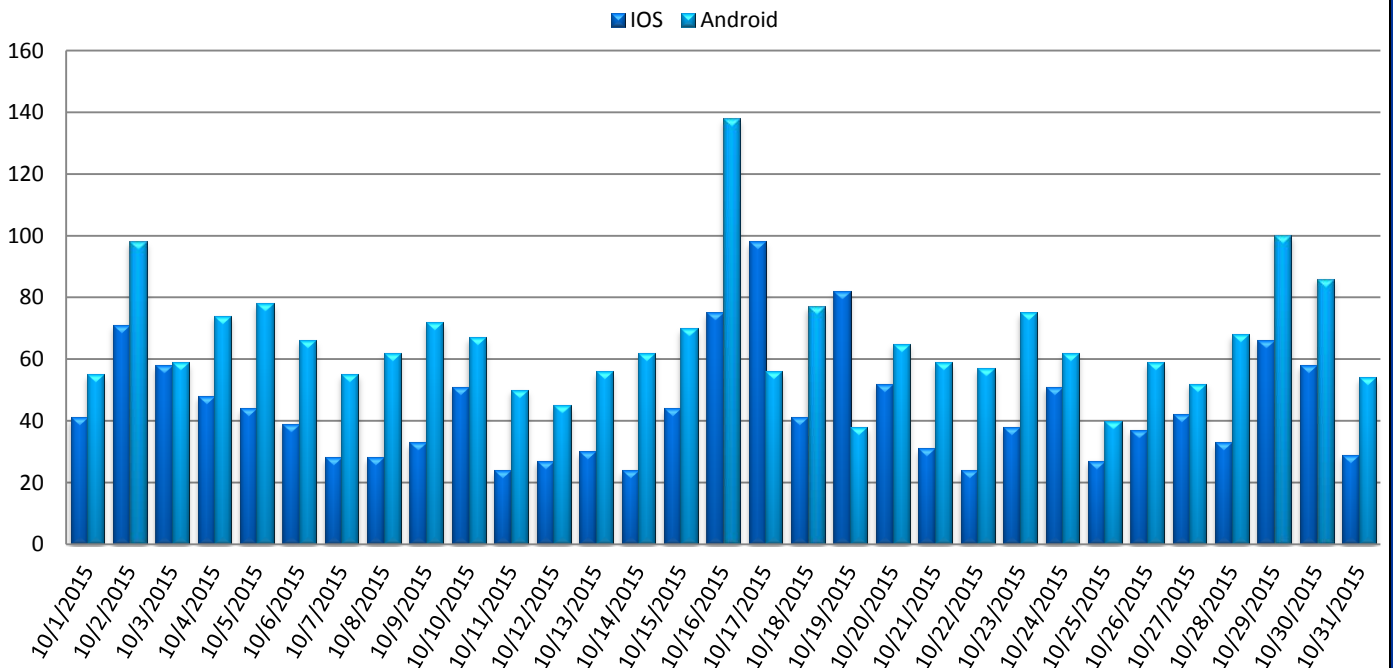
UDOT Traffic App - FY 15



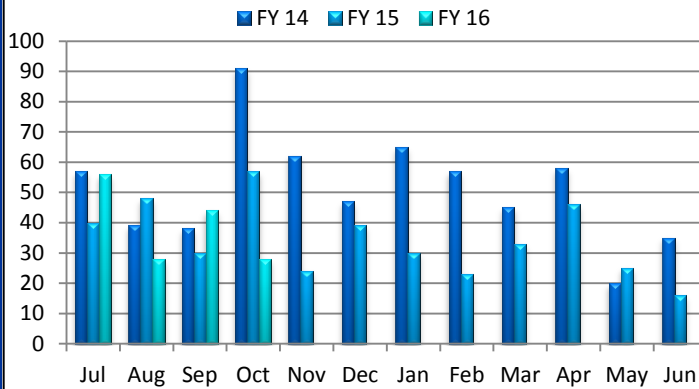
UDOT Traffic App Downloads



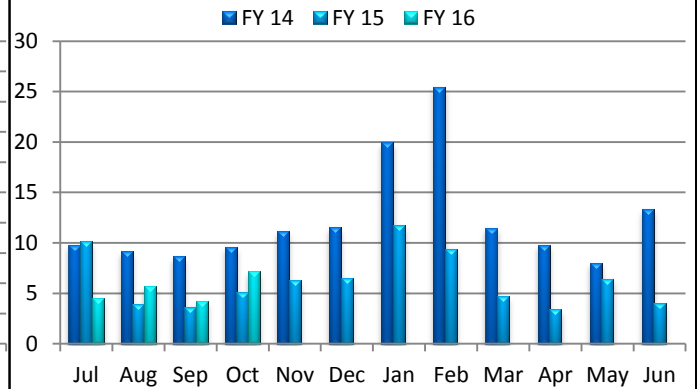
UDOT Traffic App Downloads - October 2015



Number of "Ask UDOT Traffic" Questions

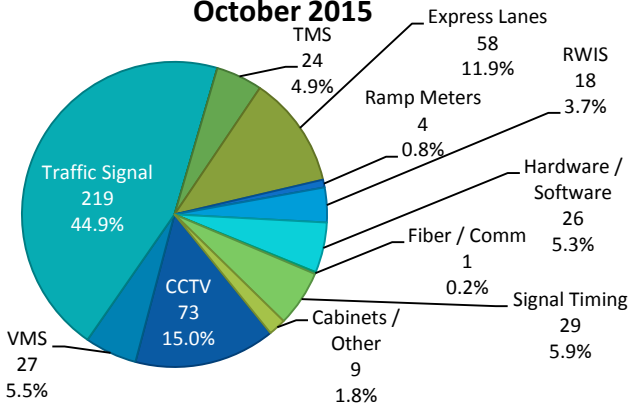


Overall Average Work Order Turnaround Days

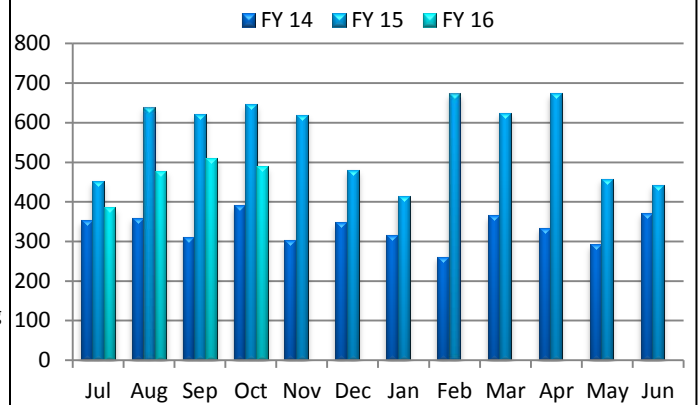


New Work Orders by Device Type

October 2015

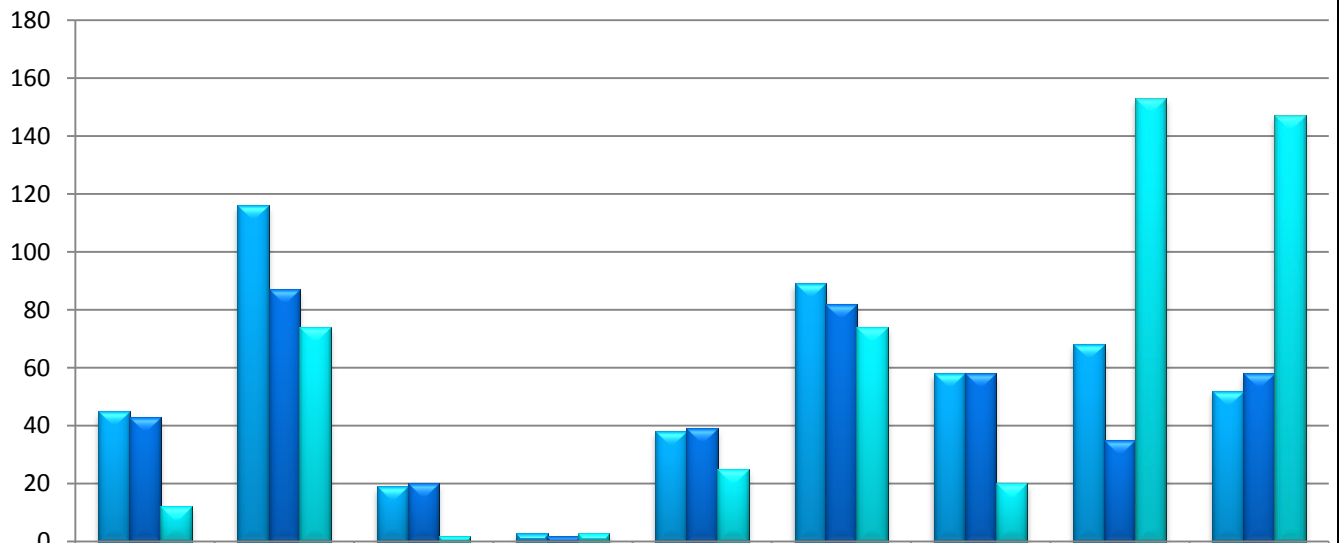


Number of New Work Orders



Work Order Statistics by Group - October 2015

Total New = 488, Closed = 424, Open = 510



	R1 Signal Maintenance	R2 Signal Maintenance	R3 Signal Maintenance	R4 Signal Maintenance	Signal Timing	ATMS	Express Lanes	ISS	Other / Engineering / Contractor
New	45	116	19	3	38	89	58	68	52
Closed	43	87	20	2	39	82	58	35	58
Open	12	74	2	3	25	74	20	153	147



CONTROL ROOM

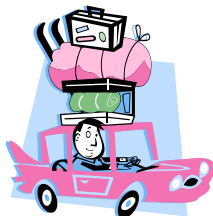
The Control Room tracked 1011 incidents during the month. This was up from 877 in September. This is attributed to the newly installed FATPOT computer assisted dispatching (CAD) software. This upgrade has increased the Control Room's ability to monitor incidents from five counties to 22. The larger monitoring footprint improves the level of service the Control Room can offer to incidents in progress. The Control Room also answered 1030 phone calls, and activated the TOCL eight times during the month.

A weather system caused flooding on US-89 at milepost 3, just north of the AZ/UT state line on the 5th of the month. This closed the highway for nearly 24 hours, and caused fewer crashes throughout the state. In addition to this incident, the Control Room also provided ongoing support to the I-15 Point Project and several smaller highway maintenance projects throughout the state.

The Control Room and Traffic Signal Operations supported U of U and BYU sporting events and a large concert at the Maverick Center. ATMS resources used included radio coordination, event specific CCTV monitoring, and adjusting signal timing for event ingress and egress.

TRAVELER INFORMATION

Traffic management support was provided for the U of U football games, a TOC tour was hosted for Salt Lake County Child Protective Services clients and assistance was given with the Express Lanes kick-off strategic planning and focus groups.



WEATHER INFORMATION

The Weather Room had 130 weather interactions, 56 outgoing Weather Alerts, four NWS collaborations, and four Road Weather Alerts.

Climatology

October 2015 was the warmest October on record for Salt Lake International Airport and temperatures were above normal across all of Utah. This is the fourth month of 2015 (February, March, June) where a new all-time maximum monthly mean temperature record was set. Precipitation was above normal in southern Utah and far western Utah, but below normal for the rest of the state (northern Utah).

Weather Operations

Information on the Winter Road Weather Index and Snow and Ice Performance Measure at the National Cooperative Highway Research Program (NCHRP) Domestic Scan Tour was presented with UDOT's Central Maintenance staff, as well as at this year's UDOT Conference. Team members visited with the British Columbia Ministry of Transportation and Infrastructure about UDOT's weather operations program. The team, in conjunction with the NWS and UDOT Avalanche Control Team, installed a camera viewing the snow depth stake at the Provo Canyon Maintenance Shed. Camera images can be viewed at:

<http://www.wrh.noaa.gov/slc/camera/single/ProvoCanyonSnowCam.php>

Weather Operations also participated in hosting TOC tours for members of the NCHRP Domestic Scan Tour, members of the Pennsylvania and Florida DOTs, a local Boy Scout Troop, and Salt Lake County Child Protective Services clients. James Bryant, Senior Program Officer (Maintenance and Preservation) at the Transportation Research Board was also hosted on a tour. Mr. Bryant has an active interest in winter maintenance operations and offered advice on UDOT's winter maintenance performance measures.

The team welcomes Brad Hunsaker to the weather forecasting group.

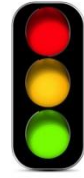
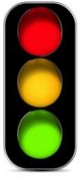


Please visit <http://www.nw-weather.net.com/UDOTMonthlyOutlook.pdf> for the current monthly climate outlook, and <http://www.nw-weather.net.com/UDOTSeasonalOutlook.pdf> for the seasonal outlook.

TRAFFIC OPERATIONS AND REPORTING

- ❖ Work was done on Redwood Road, California Avenue to SR-201 signal timing support.
- ❖ 14600 South, Bluffdale project.
- ❖ Provo/Orem Transportation Improvement Project.
- ❖ 10600 South/I-15 interchange modifications.
- ❖ TOCL support.
- ❖ US-30/US-89 corridor planning process.
- ❖ CUBE software training/users group meeting at WFRC.
- ❖ The UDOT Conference.
- ❖ Congestion Reporting.
- ❖ Managed Motorways Project.
- ❖ Region 4 GIS Story Map.
- ❖ I-215 pavement rehabilitation project.
- ❖ Layton crossing over I-15.
- ❖ 7000 South, West Jordan.
- ❖ project user costs.
- ❖ Lehi Technology Corridor Study.
- ❖ Moab Main Street.
- ❖ VISSIM Users Group Meeting.
- ❖ Ogden/WSU BRT.
- ❖ Salt Lake County E/W study.
- ❖ R3 capacity project prioritization.
- ❖ I-80 modeling from I-15 to 2300 East.
- ❖ NCHRP 3-113 field testing of DDIs.
- ❖ Kelly Burns and Grant Farnsworth took the PTOE exam.





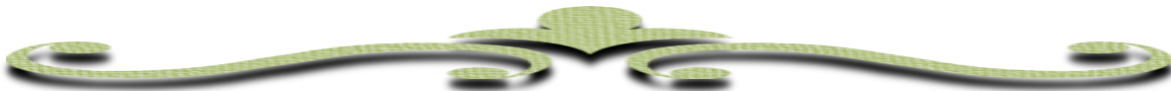
TRAFFIC SIGNAL OPERATIONS

Region 1 opened the thru-turn intersection at Hill Field Road and Main Street in Layton, and added left-turn phasing at 2300 North on SR-108.

Region 2 updated two more Flex Lane gantries on 5400 South. The remaining four gantries should be upgraded by the end of the year. The intersection at 12600 South and Mountain View Corridor was upgraded with peer-to-peer signal coordination, completing the upgrade project from Rosecrest Road to 7800 South. Signal controllers on the last two CFI's on Bangerter Highway have been upgraded, allowing traffic signal performance measures to be collected for the length of that corridor. The group implemented special event signal timing plans for the U of U football games, which improved spectator ingress and egress.

Region 3 implemented special event signal timing plans for BYU football games, which improved spectator ingress and egress. The Region replaced four signal cabinets, and replaced a broken plastic junction box at US-40 and 600 East in Roosevelt with a traffic rated polymer concrete box.

Region 4 installed reflective signal head back plate tape in three intersections; radar detection with bicycle capabilities; ADA pedestrian push buttons; constructed a vertical cabinet foundation extension; and replaced a signal cabinet, all in Cedar City. The group also installed a new traffic signal power pedestal at 500 North and Center Street in St. George.



ITS ASSET MANAGEMENT

Four freeway CCTVs were integrated along with two surface street CCTVs, one freeway VMS and two traffic signals. One traffic signal detection CCTV was removed from the system. The team continues monitoring CCTV images.

ATMS MAINTENANCE

Field: Jointly with the Lab team LFOTs were performed for the Beaver Climbing Lanes, this is the second LFOT performed that failed for this project, resulting in a third punch list. During the LFOT visit for the Beaver Creek Lane Climbing project, we provided aerial support to Lynn Yocom for line of sight verification for a radio hop for internet service to the Parowan Shed. A CCTV LFOT was performed for the SR-201 @ SR-202 project and a visit was made to the South Davis County I-15 project to trouble shoot four cameras having gas pressure problems. One Field team member completed the first phase of cross training with the HOV lane team. Fifty-seven work orders were closed for the month of October.

Lab The Lab tested and repaired 23 ATMS devices. Two traffic signal cabinets were tested/burned in for Signal contractors. Two signal cabinets were delivered to Cache Valley Electric for US-189, South Temple at 500 North, and 300 West in Tooele. With members of the ATMS Field team LFOTs were performed for the Beaver Ridge project. Working with Region 2, wiring and configuration of a 'Driver Feedback' sign was completed on SR-36 at the I-80 Westbound on ramp. Assisted Hunt Electric with the relocation of a Non-Intrusive Detection pole on SR-92 and performed an LFOT at that location. Provided assistance to Region 3 through the use of two TOC's Mobile VMS signs to warn drivers of a controlled fire near Strawberry Reservoir on Hwy 40. Another Mobile VMS sign was taken to the UDOT Annual Conference for display and set up inside the facility. The Electronics Lab assisted the Express Lanes team with puck replacements and preventative maintenance for 12 locations on I-15. One Type 1 VMS sign was off-loaded and burned in and two Type 1 VMS signs were out loaded to Wadsworth Construction for the Point Project. The Electronics Lab closed 15 work orders during the month of September.

Express Lanes Team: The team continues its cross training program and during this period we rebooted three VTMS lane controllers and six clusters, repaired and configured eight clusters. During the weekly system drive we performed PMs on six cabinets and reset the CGCI for one reader. Six sets of Sensys pucks were replaced during night time operations and ten lane PMs were performed. Three digital relays were installed. To assist the contractor for the I-15 South Davis County project we trouble shot TSI. The Express Lane Team closed 58 work orders.

ITS Standards and Specifications

The Standards Committee approved all the work that was submitted on October 22, 2015.

Narwhal Group continued work on the NEC review of all Standards and Specifications.

Work on the ATMS Solar Powered Site Standards continued and a third meeting was held.

Pinetop Engineering brought an Excel computation sheet that determined ATMS device loads. The table will be used to determine the power requirements for a particular ATMS site. With the known power loads, the engineer would select the state furnished photovoltaic systems to safely power the ATMS site. The next steps are to develop general arrangements drawings for the ATMS sites and develop a specification for the procurement of standardized sizes of state furnished photovoltaic systems.

Procurement

The Field ITS Ethernet switch RFP bids were submitted to the state and vendors submitted their test units for "In-House" testing.

The low bid for the 45 foot steel, non-lowering CCTV poles was awarded.

Special Projects

Blaine Leonard began to arrange funding for the new I-215 EB and I-15 NB VMSs.

Work continued on the IP-CCTV development. Chuck Felice and John Amidon continued to develop the IP CCTV module in the TranSuite software.

Region 1

Statewide Signal Interconnect: This has been changed to a larger scope and will be called Statewide Signal Interconnect. PineTop Engineering has been working on the design for this to advertise.

Antelope and US-89: This project is complete.

200 N. 300 W. Kayesville: This project is complete.

I-15; SR-30 to the Idaho State line: This project has been designed by PineTop Engineering and is ready to advertise. This project needs major funding for ATMS. This project may be part of a partnership with a telecom.

Layton Interchange: This project is in design.

200 N. and Flint St.: This project is complete.

Logan Main Street Fiber Interconnect: This project is under construction fiber splicing has begun.

US-89; SR-193 to Cornia Drive: This project is complete.

US-89; Antelope Drive Extension: This project is under construction.

Logan CCTV's: This project is under construction.

SR-126 and 1300 N.: This project is under construction.

Region 2

- ❖ A new Variable Message Sign at I-15 and 11400 South was installed for the I-15 Point Project. This is being relocated due to the need to remove the VMS at the 12800 South location for the reason of guide sign spacing requirements. This sign will be configured and integrated over the next few weeks.
- ❖ SR-36 Tooele Main Street reconstruction is continuing with the new Micro-duct installation. Lessons learned are helping shape direction on future projects.
- ❖ SR-201 Fiber expansion is working to install the crossing at the Arthur Mill bridge. This new fiber system will tie into the segment placed several years ago near the SR-202 junction as well as the newly place SR-202 fiber segment coming from the North.

Region 3

- ❖ **SR-92 CCTV/Hybrid VMS (12641):** Construction punch list items complete. Started electronics installation.
- ❖ **Saratoga Springs; Pony Express; SR-68 to 800 West (8581):** Waiting for contractor to request ATMS state furnished materials (CCTV).
- ❖ **Region 3 traffic signal connections (12774):** Waiting on cooperative agreement signatures with Spanish Fork City to connect three signals through their cable network. Discussing connecting these signals in PIN 13244 and using this PIN to connect 3 each Salem signals.
- ❖ **US-40 CCTV/Signal connections (12805):** STRATA working with UDOT integrator in the field to install their connection electronics.
- ❖ **Vernal; US-40 @ 2100 West Signal/CCTV (13018):** Construction NTP anticipate in November.
- ❖ **Roosevelt; US-40 @ 2000 West Signal/CCTV (12980):** NTP given. Waiting for contractor to request ATMS state furnished equipment (CCTV).
- ❖ **Provo Canyon RWIS/VMS (11410):** Project under construction to include six WANCO roadside VMS, two CCTV's, and two RWIS (plus upgrade of an existing RWIS).
- ❖ **US-189; State Park to Rock Cut passing Lanes (11415):** Project being advertised.
- ❖ **Fiber connection to three Maintenance Sheds (13681):** Fiber drop installation started. Completion anticipated early November.
- ❖ **SR -92; Utility relocate for BOR easement (13707):** Integration/project completed.
- ❖ **Spanish Fork; SR-156; 1000 North to I-15 (13687):** Project combined with PIN 9976. (9976 - Spanish Fork; SR-156; 300 South to M.P. 2) – PS& E scheduled for November 3.
- ❖ **Roosevelt; US-40 @ 1500 East Signal/CCTV (13853):** In design.
- ❖ **Provo; SR-256; 800 East to Univ Ave BRT (10266):** Design ongoing.
- ❖ **US-40; Myton Bench roadway widening (11358):** Design ongoing.
- ❖ **Spanish Fork; Canyon Rd @ 2550 E Signal (10960):** State furnished equipment ordered.
- ❖ **American Fork; SR-74; Main to 300 N widening (11219):** Design ongoing.

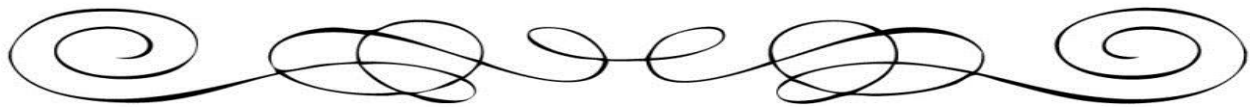
Region 4

- ❖ **St. George:** This project is complete, except for some city and UDOT fiber coordination.
- ❖ **Pine Creek Truck Climbing Lane:** This project is nearly complete.
- ❖ **Fiber upgrade for US-6, Helper and Price Signal Integration:** Telecom work has been completed. UDOT is ready to complete the final contractor package for a procurement contract. We are waiting for decisions to be made in regard to additional solar powered sites to be added to the construction package.
- ❖ **Beaver Truck Climbing Lane:** Project is under construction.
- ❖ **I-15; North Beaver to Manderfield:** This project is complete. Solar sites and CCTV locations to be re-located are being mitigated.
- ❖ **Cedar City Fiber:** We have received bids back from two contractors and decided to post pone the project due to budgetary reasons.
- ❖ **Price, Helper fiber and Interconnect:** This project has been completed.
- ❖ **Beaver Shed and Fiber HUB:** We have received bids from three contractors and have awarded the contract to Hidden Peak Electric.

Acronyms

CCTV	Closed Circuit Television	DPS	Department of Public Safety
EIS	Emergency Information System	HAR	Highway Advisory Radio
I2TMS	Integrated Interagency Traffic Management System		
ITS	Intelligent Transportation System	LFOT	Local Field Operations Test
MIC	Manager in Charge	MOT	Maintenance of Traffic
RWIS	Road-Weather Information System	TAC	Technical Advisory Committee
TMD	Traffic Management Division	TMS	Traffic Monitoring Station
TOC	Traffic Operations Center	VMS	Variable Message Sign





I'M YET ANOTHER RESOURCE-CONSUMING KID IN AN OVERPOPULATED PLANET, RAISED TO AN ALARMING EXTENT BY MADISON AVENUE AND HOLLYWOOD, POISED WITH MY CYNICAL AND ALIENATED PEERS TO TAKE OVER THE WORLD WHEN YOU'RE OLD AND WEAK!

